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Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Allowable Subject Matter

The Examiner's indication that claims 4, 14 and 16 includes allowable subject matter, and the allowance of claim 6, are greatly appreciated. Claims 4 and 14 have been amended to independent form and claim 16 depends from claim 14. Thus these claims also are believed to be in condition for allowance.

Amendments

In addition to the amendments mentioned above, claim 1 has been amended to delete an unnecessary comma and claim 6 has been amended to include an identifier for the third step, step "c)." These amendments are matters of form rather than substance and thus the amendment to claim 6 is not believed to affect the allowance of that claim.

New claim 24 specifies a method that includes the step of manufacturing a former in a flat or substantially flat shape over its entire area to form a flat shape former. New claim 25 specifies that the former is manufactured from an electrically insulating material.

Claim Rejections - 35 U.S.C. § 102 and § 103

Claims 1-3, 5, 13 and 15 have been rejected under 35 U.S.C. §102(b) as being anticipated by or under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 3,136,034 to Reese et al. ("Reese").

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Reese

Reese discloses a balance wheel and coil assembly for a watch. The coil is wound of extremely small wire that presents problems unknown to the coil winding art as that art relates to larger coils, particularly with regard to the practice of winding a coil about a core that is then removed. (See Reese, col. 1, lines 9-40.)

Reese addresses these problems by providing a core 44 around which a coil 28 can be wound that becomes part of the coil assembly and is not removed. The core 44 is made by winding a strip of metal around an elongated mandrel 60, then cutting and bending the wound strip to form a plurality of cores substantially simultaneously (Reese, FIGS. 3-6 and accompanying text, col. 2, line 53 through col. 3, line 30).

Novelty

The Examiner has taken the position that "it would have [been] inherent to have the core 44 as a substantially flat shape prior to bending the core 44 around the mandrel 60." (Paper No. 28, page 3.) While the metallic strip used in Reese's manufacturing process could possibly be flat initially, the individual cores 44 are not formed in a flat shape and then bent to shape. Rather, the metallic strip is bent around the mandrel into a curved shape before it is cut to form the individual cores. Individual cores are not made until the coiled strip is cut, as shown in Figure 5. Consequently, Reese fails to disclose the claimed invention, namely the sequential steps of:

- a) manufacturing a former in a flat or substantially flat shape to form a flat shape former;
- b) bending the flat shape former into a curved shape to form a curved former; and
- c) winding at least one electrical conductor around the curved former formed in step (b).

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X (The Examiner also took the position that a portion (74) of the core 44 remains flat after the strip is bent around the mandrel 60, as shown in Figure 5, and that this flat portion 74 is subsequently bent by the forming blade 79 as shown in Figure 6. While the Examiner is correct to state that the portion 74 of the core is not bent when the strip is wound around the mandrel 60, this does not satisfy the claim limitation of manufacturing the former in a flat or substantially flat shape and then bending the flat shape former into a curved shape. The flat portion 74 of Reese's core 44 is only a portion of the core, not a flat shape former.

Accordingly, the claimed invention is believed to be novel in view of Reese, and withdrawal of the rejection is requested.

Nonobviousness

As an alternative, the Examiner has taken the position that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to initially have manufactured the former (core 44) of Reese from a flat or substantially flat shape to positively allow the former to fit over the mandrel 60 and allow accurate bending." (Paper No. 28, page 3.)

The undersigned respectfully submits, however, that a person of ordinary skill in the art would not have been so motivated by Reese to form a flat core and then place it on the mandrel so that it could be bent.

First, Reese's method appears to work satisfactorily and no teaching or suggestion has been found to cause a person of ordinary skill in the art to proceed in a different manner.

Second, the teachings of Reese must be considered as a whole, and Reese teaches winding a wire around a mandrel before cutting and then bending the wire into its final shape. No teaching or suggestion has been found that would motivate a person

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of ordinary skill in the art to act otherwise. In particular, no teaching or suggestion has been found for first making a flat shape core and then placing it on the mandrel for bending.

Consequently, the undersigned respectfully submits that the claimed invention would not have been obvious to a person of ordinary skill in the art at the time of the invention, in view of Reese. Withdrawal of the rejection is requested.

Conclusion

The undersigned requests timely issuance of a notice of allowance. The Examiner is encouraged to telephone the undersigned to resolve any remaining matters.

Respectfully submitted,

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